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     (FILE 'HOME' ENTERED AT 08:10:11 ON 22 OCT 2002)

     FILE 'REGISTRY' ENTERED AT 08:10:20 ON 22 OCT 2002
L1            1 S 25656-57-9/RN

     FILE 'CAPLUS' ENTERED AT 08:11:48 ON 22 OCT 2002
L2           77 S L1
L3           22 S L2 AND ELECTRODE#
L4            3 S L2 AND BATTER###
L5           22 S L3 OR L4

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L4   ANSWER 1 OF 3  CAPLUS  COPYRIGHT 2002 ACS
ACCESSION NUMBER:         1987:462039  CAPLUS
DOCUMENT NUMBER:          107:62039
TITLE:                    Secondary polymer batteries
INVENTOR(S):              Shinozaki, Kenji; Nojiri, Akio; Tomizuka, Yukio
PATENT ASSIGNEE(S):       Furukawa Electric Co., Ltd., Japan
SOURCE:                   Jpn. Kokai Tokkyo Koho, 3 pp.
                          CODEN: JKXXAF
DOCUMENT TYPE:            Patent
LANGUAGE:                 Japanese
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.        KIND  DATE           APPLICATION NO.  DATE
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     JP 62020253        A2   19870128       JP 1985-158369   19850719
AB   Durable batteries with a high energy d. and coulomb efficiency
     use poly(diphenylamine) (I) as electrode materials.  I electrochem.
     deposited on a Pt electrode from 0.1 Ph2NH + 1.mu. HClO4 soln. was washed,
     dried, and used as a cathode for a battery having a Li anode and
     a 1.mu. LiClO4/propylene carbonate electrolyte.  The battery has
     a capacity of 0.12 W-h/kg; the coulomb efficiency at the 100th
     charge-discharge cycle was >95%, whereas the efficiency of a
     battery using a polyacetylene cathode dropped to <40% after 20
     cycles.
IT   Cathodes
        (battery, polydiphenylamine)
IT   25656-57-9, Diphenylamine, polymer
     RL: DEV (Device component use); USES (Uses)
        (cathodes, for secondary batteries)
IT   25656-57-9, Diphenylamine, polymer
     RL: DEV (Device component use); USES (Uses)
        (cathodes, for secondary batteries)
RN   25656-57-9  CAPLUS
CN   Benzenamine, N-phenyl-, homopolymer (9CI)  (CA INDEX NAME)
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CM 1

CRN 122-39-4
CMF C12 H11 N

Ph—NH—Ph

L4 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1987:426069 CAPLUS
DOCUMENT NUMBER: 107:26069
TITLE: Polyaniline-type electrodes
INVENTOR(S): Naito, Kazumi; Ikezaki, Takashi
PATENT ASSIGNEE(S): Showa Denko K. K., Japan; Hitachi, Ltd.
SOURCE: Jpn. Kokai Tokkyo Koho, 3 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 61281463	A2	19861211	JP 1985-122770	19850607
JP 05058228	B4	19930826		

AB The title electrodes contain poly(diphenylamine) as the binder. A 0.3M aq. (NH4)2S2O8 was added dropwise to aq. soln. of 0.6M PhNH2 and 3M HBF4 and the mixt. was reacted at 40.degree. for 2 h to give the HBF4 salt of polyaniline. This polymer 5 g was mixed with 2 g poly(diphenylamine) (m.p. 130.degree., prepd. by polymn. of Ph2NH in C6H6 with FeCl3 catalyst), fused at 140.degree., and cooled under pressure to give a film with a bending strength of 1115 kg/cm2. A **battery** using this film as the cathode, a Li anode, and 2M LiBF4/propylene carbonate electrolyte had a charge-discharge cycle life of 621 cycles and an energy d. of .apprx.173 W-h/kg electrode vs. the resp. values of 526 cycles and 127 W-h/kg for a **battery** using a pressed polyaniline-carbon black cathode which had a bending strength of 45 kg/cm2.

IT Binding materials
(poly(diphenylamine), for polyaniline electrodes in secondary **batteries**)

IT Electrodes
(**battery**, polyanilines, poly(diphenylamine) binder for)

IT **25656-57-9**, Poly(diphenylamine)
RL: USES (Uses)
(binder, polyaniline electrodes contg., for secondary **batteries**)

IT 97917-08-3 99742-70-8
RL: USES (Uses)
(cathodes, contg. polydiphenylamine binder, for secondary

batteries)
IT 25233-30-1, Polyaniline
RL: USES (Uses)
(cathodes, contg. polydiphenylamine binders, for secondary batteries)
IT **25656-57-9**, Poly(diphenylamine)
RL: USES (Uses)
(binder, polyaniline electrodes contg., for secondary **batteries**)
RN 25656-57-9 CAPLUS
CN Benzenamine, N-phenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 122-39-4
CMF C12 H11 N

Ph—NH—Ph

L4 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1987:70305 CAPLUS
DOCUMENT NUMBER: 106:70305
TITLE: Secondary **battery** and its electrodes
INVENTOR(S): Hirai, Ryuichi; Maruyama, Isao; Sakon, Yoshihiro
PATENT ASSIGNEE(S): Maruzen Oil Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 61206170	A2	19860912	JP 1985-47203	19850309
JP 04003066	B4	19920121		

AB A secondary **battery** has its cathode and/or anode prepd. from a polymer of I, where R = H, alkyl, alkenyl, or II; X, Y, and Z are Cl, Br, I, Me, or Et; and l, m, and n are integers .ltoreq.2, with n = 0 when both l and m = 0. Thus, a **battery** using poly(diphenylamine) electrodes, C-based-fiber collectors, a glass-fiber separator, and 1M LiClO4 in propylene carbonate electrolyte was repeatedly charged at 1.0 mA for 60 min and discharged at 0.5 mA to 1.0 V. The voltages at the end of charging, the open circuit voltages after charging, and the coulombic efficiencies were 3.3, 3.0, and 28; 3.4, 3.2, and 68; and 3.8 V, 3.3 V, and 73% for the 1st, 4th, and 10th cycles, resp. A **battery** using the polymer cathode and a Li anode had a coulombic efficiency of 98% at the 25th cycle.

IT **Batteries**, secondary
(lithium-polyamine or polyamine, nonaq.)
IT Electrodes
(**battery**, polyamine)
IT **25656-57-9**, Poly(diphenylamine) 25656-58-0
RL: USES (Uses)
(electrodes, for secondary nonaq. **batteries**)
IT **25656-57-9**, Poly(diphenylamine)
RL: USES (Uses)
(electrodes, for secondary nonaq. **batteries**)
RN 25656-57-9 CAPLUS
CN Benzenamine, N-phenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 122-39-4
CMF C12 H11 N

Ph—NH—Ph